



SYNTHETIC MINOR OPERATING PERMIT

PERMITTEE: CIRCLE K SCRAP METAL, LLC
FACILITY NAME: CIRCLE K SCRAP METAL, LLC
LOCATION: CALERA, CHILTON COUNTY, AL

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE OR DEVICE
403-0017-X002	ENGINE #1 - 3,300 HP DIESEL ENGINE w/ OXIDATION CATALYST

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§ 22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§ 22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: February XX, 2023

Alabama Department of Environmental Management

1. This Permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the Permittee's responsibility to comply with such rules.
2. This Permit is not transferable. Upon sale or legal transfer, the new owner or operator shall apply for a permit within 30 days.
3. A new permit application shall be made for new sources, replacements, alterations, or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. The Permittee shall keep this Permit under file or on display at all times at the site where the facility for which the Permit is issued is located and shall make the Permit readily available for inspection by any or all persons who may request to see it.
5. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by 40 CFR Part 60, as the same may be amended or revised.
6. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shut down as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events that exceed one (1) hour within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
7. In case of shutdown of air pollution control equipment for scheduled maintenance for a period greater than one (1) hour, the intent to shut down shall be reported to the Air Division at least 24 hours prior to the planned shutdown, unless accompanied by the immediate shutdown of the emission source.
8. In the event there is a breakdown of equipment in such a manner as to cause increased emission of air contaminants for a period greater than one (1) hour, the person responsible for such equipment shall notify the Air Division within an additional 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
9. This process, including all air pollution control devices and capture systems for which this Permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
10. This Permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the Permit.
11. On completion of construction of the device(s) for which this Permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this Permit.

12. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
13. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
14. Nothing in this Permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
15. The Air Division shall be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter.

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports shall be submitted to the Air Division within 60 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

16. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific Permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.
17. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
18. This Permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
19. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
 - (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
 - (c) by paving; or
 - (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;
 - (e) Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.
20. Precautions shall be taken by the Permittee and its personnel to ensure that no person shall ignite, cause to be ignited, permit to be ignited, or maintain any open fire in such a manner as to cause the Department's rules and regulations applicable to open burning to be violated.
 21. In accordance with ADEM Admin. Code. r. 335-3-4-.01(1), any source of particulate emissions shall not discharge more than one, 6-minute average opacity greater than 20% in any 60-minute period. At no time shall any source discharge a 6-minute average opacity of particulate emissions greater than 40%. Opacity shall be determined by Method 9 of Appendix A-4 to 40 CFR Part 60.
 22. Should this facility, at any time, exceed the limits listed herein, the Permittee shall notify the Air Division within two (2) working days of determining that the exceedance occurred.
 23. The Permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this Permit would have required halting or reducing the permitted activity.
 24. The issuance of this Permit does not convey any property rights of any sort, or any exclusive privilege.
 25. The Permittee shall, at all times, operate and maintain any emissions source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.
 26. This 3,300-horsepower diesel-fired engine (Engine #1) is subject to the applicable portions of 40 CFR Part 63, Subpart ZZZZ – *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines* (Subpart ZZZZ).
 27. *Operational Limitations* —
 - (a) *Operational Hours* — The Permittee shall limit Engine #1 to the following:
 - (1) No more than 1,400 operating hours during any consecutive 12-month period; and
 - (2) Minimal startup period needed for appropriate and safe loading of the engine, which shall not exceed 30 minutes and includes time spent idling during startup.

- (b) *Fuel Consumption* — The Permittee shall limit fuel consumption to only ultra-low sulfur diesel (ULSD) fuel, as defined in 40 CFR 1090.305.
 - (c) *Operational Requirements* — The Permittee shall only operate Engine #1 with the following articles properly installed and functional:
 - (1) A non-resettable hour meter;
 - (2) Either an open crankcase filtration emission control system or closed crankcase ventilation system, per the requirements of 40 CFR 63.6625(g);
 - (i) A *closed crankcase ventilation system* shall prevent crankcase emissions from being emitted to the atmosphere.
 - (ii) An *open crankcase filtration emission control system* shall reduce emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.
 - (3) Diesel oxidation catalyst (DOC); and
 - (4) Continuous parameter monitoring system (CPMS).
28. *Emission Standards* — The Permittee shall continuously limit emissions from Engine #1.
- (a) *Carbon Monoxide (CO)* — CO emissions shall be limited to either of the following:
 - (1) No greater than 23 parts per million by dry volume (23 ppmvd) corrected to 15 percent oxygen content (23 ppmvd @ 15% O₂); OR
 - (2) Reduce CO emissions from Engine #1 via the DOC by at least 70%.
29. *Monitoring Requirements* —
- (a) *Continuous Parameter Monitoring System (CPMS)* — The Permittee shall install, operate, and maintain a CPMS onto the DOC to detect catalyst inlet temperature, according 40 CFR 63.6625(b) and items 10(a)(ii) through (v) of *Table 6 to Subpart ZZZZ*:
 - (1) *Temperature* — The Permittee shall perform the following:
 - (i) Maintain DOC inlet temperature between 450 °F and 1350 °F, as determined by 4-hour rolling averages.
 - (ii) The CPMS temperature sensor shall have a minimum tolerance of 2.8 °C (5 °F) or 1% of the measurement range, whichever is larger.
 - (2) *Data Collection* — The Permittee shall use the CPMS to continuously monitor the DOC inlet temperature while Engine #1 is operating.
 - (i) The CPMS shall collect temperature data at least once every 15 minutes and adhere to the data monitoring and collection procedures of 40 CFR 63.6635.
 - (ii) These data shall be reduced to 4-hour rolling averages.
 - (iii) Each 4-hour average shall be recalculated at least once every 15 minutes.
 - (iv) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, the Permittee shall use all valid data in the data averages and calculations used to report emission or operating levels.

- (A) A *monitoring malfunction* is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data.
- (B) Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
- (v) Any data recorded during monitoring malfunctions (including period during which the CPMS was out-of-control), associated repairs, and required quality assurance or control activities shall not be used in the data averages and calculations used to report emission or operating levels.
- (A) The CPMS is *out-of-control* if one of the following occurs:
 - (I) The zero (low-level), mid-level (if applicable), or high-level calibration drift (CD) exceeds two times the applicable CD specification in the CPMS performance specification; or
 - (II) The CPMS fails a performance evaluation or relative accuracy test audit (RATA).
- (b) *Periodic Monitoring Requirements* —
 - (1) *Pressure* — The Permittee shall periodically monitor the differential pressure (*i.e.*, pressure drop) across the DOC.
 - (i) Except during period of startup, DOC differential pressure shall be maintained within 2 inches of water column (± 2 "w.c.) of the average differential pressure measured during the initial performance test.
 - (ii) The DOC differential pressure shall be measured at least once per month to demonstrate that the differential pressure is within the operating limitation established during the initial performance test.
- (c) *Site-Specific Monitoring Plan (SSMP)* — The Permittee shall prepare a SSMP that addresses the monitoring system design, data collection, and the quality assurance and quality control elements provided in Proviso No. 29(a) above and 40 CFR 63.8(d).
 - (1) *Quality Control Program* — As provided under 40 CFR 63.8(d), the SSMP shall include, at a minimum, a written protocol that describes procedures for each of the following operations:
 - (i) Initial and any subsequent calibration of the CMS;
 - (ii) Determination and adjustment of the calibration drift of the CMS;
 - (iii) Preventive maintenance of the CMS, including spare parts inventory;
 - (iv) Data recording, calculations, and reporting;
 - (v) Data recording, calculations, and reporting; and
 - (vi) Program of corrective action for when the CPMS is malfunctioning.
 - (2) As provided under 40 CFR 63.6625(b), the SSMP shall also include the following elements:

- (i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;
 - (ii) Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;
 - (iii) Equipment and procedures for performance evaluations, system accuracy audits, or other audit procedures;
 - (iv) Ongoing operation and maintenance procedures in accordance with the provisions of 40 CFR 63.8(c)(1)(ii) and (c)(3), which are provided in Provisos (A) through (C) below;
 - (A) The Permittee shall keep the necessary parts for routine repairs of the affected CMS equipment readily available.
 - (B) All CMS shall be installed, operational, and the data verified as specified in Subpart ZZZZ either prior to or in conjunction with conducting performance tests under 40 CFR 63.7, except 40 CFR 63.7(e)(1) does not apply as per *Table 8 to Subpart ZZZZ*.
 - (C) Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system.
 - (v) Ongoing reporting and recordkeeping procedures in accordance with provisions in 40 CFR 63.10(c) and (e)(2)(i), which are provided under Proviso Nos. 32(a)(4) through (6) and 33(b)(1)(ix) below.
- (3) The Permittee shall conduct an annual CPMS equipment performance evaluation, which shall be detailed within the SSMP.

30. *Compliance and Performance Test Methods and Procedures* —

- (a) *Performance Testing* — The Permittee shall conduct performance tests to demonstrate compliance with the CO emission limitation in Proviso No. 28 above.
 - (1) *Frequency* — Each performance test shall be conducted no less frequently than once every three (3) years.
 - (2) *Procedures* — Each performance test shall be conducted according to the requirements of 40 CFR 63.6620 and item 3 of *Table 4 to Subpart ZZZZ*.
 - (3) *Test Methods* — The Permittee shall use the following methods for performance testing of Engine #1:
 - (i) Method 10 of Appendix A-4 to 40 CFR Part 60 shall be used in the determination of CO emissions.
- (b) *CPMS Performance Evaluation* — The Permittee shall conduct the CPMS equipment performance evaluation specified in the SSMP at least annually.
 - (1) When conducting any performance test of Engine #1, the Permittee shall simultaneously conduct a performance evaluation of the CPMS.

31. *Records Retention* — All records (including all reports and notifications submitted to the Department) shall be maintained in a form suitable for inspection for a period of at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
- (a) At a minimum, the most recent 2 years of data shall be maintained onsite, in a form suitable for expeditious review, and made available immediately upon request.
- (b) The remaining 3 years of data may be maintained off site in a form suitable for inspection.
32. *Recordkeeping Requirements* —
- (a) The Permittee shall maintain the following records:
- (1) *General* —
- (i) A copy of each notification and report submitted to the Department and/or EPA, include all relevant data required under Proviso No. 33 below;
- (ii) All required data needed to demonstrate compliance with Subpart ZZZZ, including both raw and averaged CPMS temperature data, DOC differential pressure checks, performance test results, and performance evaluation results;
- (2) *Engine #1* —
- (i) Monthly and 12-month rolling totals of the hours of operation for Engine #1;
- (ii) The occurrence and duration of each malfunction of Engine #1;
- (iii) All reporting data specified under Proviso Nos. 33(b)(1)(vii) below;
- (3) *Diesel Oxidation Catalyst* —
- (i) All maintenance performed on the DOC;
- (ii) The occurrence and duration of each malfunction of the DOC;
- (iii) All differential pressure checks performed on the DOC;
- (iv) All reporting data specified under Proviso Nos. 33(b)(1)(vii) below;
- (4) *Continuous Parameter Monitoring System* —
- (i) All temperature data (both raw and averaged) necessary to determine the conditions of performance tests and performance evaluations, including data during unavoidable CPMS breakdowns and out-of-control periods;
- (ii) All CPMS calibration checks;
- (iii) All adjustments and maintenance performed on the CPMS, including the nature of the repairs or adjustments to the CPMS when inoperative or out-of-control;
- (iv) All procedures that are part of a quality control program developed and implemented for the CPMS under Proviso No. 29(c)(1) above.
- (v) The beginning and ending dates and times of each period where emissions, temperature readings were exceeded during normal operation and periods of startup (except as provided in Proviso No. 27(a)(2) above), shutdown, and malfunction;

- (vi) The nature and cause of any malfunction (if known);
- (vii) The corrective action(s) taken to remedy the malfunction and/or preventive measures adopted to prevent future malfunctions; and
- (viii) All reporting data specified under Proviso Nos. 33(b)(1)(ix) below.

(5) *Corrective Actions* —

- (i) Actions taken during periods of malfunction to minimize emissions in accordance with Proviso No. 25, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation;

(6) *Site-specific Monitoring Plan* —

- (i) The current SSMP and performance evaluation plan, as well as previous (*i.e.*, superseded) versions.
 - (A) Previous versions of the SSMP and performance evaluation plan shall be maintained for at least 5 years following the implementation of each new revision in accordance with Proviso No. 31 above.

33. *Reporting Requirements* —

(a) *Performance Tests & Evaluations* —

- (1) The Permittee shall provide the Department with the results of each performance test or performance evaluation within 60 days following the conclusion of said test or evaluation.
- (2) The Permittee shall provide the results of each CPMS performance evaluation simultaneously with the results of each performance test.

(b) *Semiannual Compliance Report* — The Permittee shall submit a semiannual compliance report (SCR) for Engine #1 to the Department as follows:

(1) *Contents* — The following information shall be included in every SCR:

- (i) Company name and address;
- (ii) Certification of Truth, Accuracy, and Correctness (CTAC) statement signed by the Responsible Official of the facility, certifying the accuracy of the content of the SCR;
- (iii) Date of SCR;
- (iv) Beginning and ending dates of the reporting period;
- (v) The monthly and 12-month rolling totals of operational hours for Engine #1 for each month in the reporting period;
- (vi) If there were no process equipment malfunctions, no deviations from any applicable emission or operating limitations, and no periods during which the CPMS was malfunctioning or out-of-control, the Permittee shall include a statement that states the following:

- (A) "During the reporting period, there were no process equipment malfunctions, no deviations from any Permit conditions (including emissions or operating limitations), and no periods during which the CPMS was malfunctioning or out-of-control."
- (B) The above statement may be modified as needed to accommodate for any malfunctions or deviations that may have occurred during the reporting period.
- (vii) *Malfunctions* — If a malfunction occurred during the reporting period, then the SCR shall include the following:
 - (A) The number, duration, and a brief description for each type of malfunction which occurred during the reporting period and caused (or may have caused) any applicable emission limitation to be exceeded;
 - (B) A description of actions taken by the Permittee during a process equipment malfunction to minimize emissions in accordance with Proviso No. 25, including any actions taken to correct a malfunction.
- (viii) *Permit Deviations* — If a deviation from any permit condition occurred during the reporting period, then the SCR shall include the following:
 - (A) The number, duration, and a brief description for each type of deviation which occurred during the reporting period and caused (or may have caused) any permit condition, emission limitation, or operating limitation to be exceeded;
 - (B) A description of actions taken by the Permittee during a malfunction of Engine #1 to minimize emissions in accordance with Proviso No. 25, including any actions taken to correct a malfunction.
- (ix) *CPMS Malfunctions* — If there was any period during which the CPMS was malfunctioning or otherwise out-of-control during the reporting period, then the SCR shall include the following:
 - (A) The date and time that each malfunction started and stopped;
 - (B) The date, time, and duration that each CPMS was inoperative, except for zero (low-level) and high-level checks;
 - (C) The date, time, and duration that each CPMS was out-of-control, including start and end dates and hours and descriptions of corrective actions taken;
 - (D) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period;
 - (E) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period;
 - (F) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes;
 - (G) A summary of the total duration of CPMS downtime during the reporting period, and the total duration of CPMS downtime as a rolling percent of the total operating time of Engine #1 at which each CPMS downtime occurred during that reporting period;

- (H) An identification of which monitoring parameter (*i.e.*, temperature, pressure) of Engine #1 that was determined to be out-of-control or outside of the established limits of said monitoring parameter;
 - (I) A brief description of Engine #1 and the CPMS;
 - (J) The date of the latest CPMS certification/audit; and
 - (K) A description of any changes in CPMS, processes, or controls since the last reporting period.
- (2) *Reporting Period* — The SCR shall adhere to the following schedule:
- (i) The first SCR must cover the period beginning on the initial startup date of Engine #1 and ending on June 30 or December 31, whichever is first.
 - (ii) Each subsequent SCR must cover the semiannual reporting period from January 1 through June 30 or July 1 through December 31.
 - (iii) All SCR must be postmarked or delivered no later than July 31 or January 31, whichever is first date following the end of the reporting period.



SYNTHETIC MINOR OPERATING PERMIT

PERMITTEE: CIRCLE K SCRAP METAL, LLC
FACILITY NAME: CIRCLE K SCRAP METAL, LLC
LOCATION: CALERA, CHILTON COUNTY, AL

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE OR DEVICE
403-0017-X004	ENGINE #3 - 4,300 HP DIESEL ENGINE w/ OXIDATION CATALYST

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 - (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
 - (c) by paving; or
 - (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;
 - (e) Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.
20. Precautions shall be taken by the Permittee and its personnel to ensure that no person shall ignite, cause to be ignited, permit to be ignited, or maintain any open fire in such a manner as to cause the Department's rules and regulations applicable to open burning to be violated.
 21. In accordance with ADEM Admin. Code. r. 335-3-4-.01(1), any source of particulate emissions shall not discharge more than one, 6-minute average opacity greater than 20% in any 60-minute period. At no time shall any source discharge a 6-minute average opacity of particulate emissions greater than 40%. Opacity shall be determined by Method 9 of Appendix A-4 to 40 CFR Part 60.
 22. Should this facility, at any time, exceed the limits listed herein, the Permittee shall notify the Air Division within two (2) working days of determining that the exceedance occurred.
 23. The Permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this Permit would have required halting or reducing the permitted activity.
 24. The issuance of this Permit does not convey any property rights of any sort, or any exclusive privilege.
 25. The Permittee shall, at all times, operate and maintain any emissions source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.
 26. This 4,300-horsepower diesel-fired engine (Engine #3) is subject to the applicable portions of 40 CFR Part 63, Subpart ZZZZ – *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines* (Subpart ZZZZ).
 27. *Operational Limitations* —
 - (a) *Operational Hours* — The Permittee shall limit Engine #3 to the following:
 - (1) No more than 1,400 operating hours during any consecutive 12-month period; and
 - (2) Minimal startup period needed for appropriate and safe loading of the engine, which shall not exceed 30 minutes and includes time spent idling during startup.

- (b) *Fuel Consumption* — The Permittee shall limit fuel consumption to only ultra-low sulfur diesel (ULSD) fuel, as defined in 40 CFR 1090.305.
 - (c) *Operational Requirements* — The Permittee shall only operate Engine #3 with the following articles properly installed and functional:
 - (1) A non-resettable hour meter;
 - (2) Either an open crankcase filtration emission control system or closed crankcase ventilation system, per the requirements of 40 CFR 63.6625(g);
 - (i) A *closed crankcase ventilation system* shall prevent crankcase emissions from being emitted to the atmosphere.
 - (ii) An *open crankcase filtration emission control system* shall reduce emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.
 - (3) Diesel oxidation catalyst (DOC); and
 - (4) Continuous parameter monitoring system (CPMS).
28. *Emission Standards* — The Permittee shall continuously limit emissions from Engine #3.
- (a) *Carbon Monoxide (CO)* — CO emissions shall be limited to either of the following:
 - (1) No greater than 23 parts per million by dry volume (23 ppmvd) corrected to 15 percent oxygen content (23 ppmvd @ 15% O₂); OR
 - (2) Reduce CO emissions from Engine #3 via the DOC by at least 70%.
29. *Monitoring Requirements* —
- (a) *Continuous Parameter Monitoring System (CPMS)* — The Permittee shall install, operate, and maintain a CPMS onto the DOC to detect catalyst inlet temperature, according 40 CFR 63.6625(b) and items 10(a)(ii) through (v) of *Table 6 to Subpart ZZZZ*:
 - (1) *Temperature* — The Permittee shall perform the following:
 - (i) Maintain DOC inlet temperature between 450 °F and 1350 °F, as determined by 4-hour rolling averages.
 - (ii) The CPMS temperature sensor shall have a minimum tolerance of 2.8 °C (5 °F) or 1% of the measurement range, whichever is larger.
 - (2) *Data Collection* — The Permittee shall use the CPMS to continuously monitor the DOC inlet temperature while Engine #3 is operating.
 - (i) The CPMS shall collect temperature data at least once every 15 minutes and adhere to the data monitoring and collection procedures of 40 CFR 63.6635.
 - (ii) These data shall be reduced to 4-hour rolling averages.
 - (iii) Each 4-hour average shall be recalculated at least once every 15 minutes.
 - (iv) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, the Permittee shall use all valid data in the data averages and calculations used to report emission or operating levels.

- (A) A *monitoring malfunction* is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data.
- (B) Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
- (v) Any data recorded during monitoring malfunctions (including period during which the CPMS was out-of-control), associated repairs, and required quality assurance or control activities shall not be used in the data averages and calculations used to report emission or operating levels.
- (A) The CPMS is *out-of-control* if one of the following occurs:
 - (I) The zero (low-level), mid-level (if applicable), or high-level calibration drift (CD) exceeds two times the applicable CD specification in the CPMS performance specification; or
 - (II) The CPMS fails a performance evaluation or relative accuracy test audit (RATA).
- (b) *Periodic Monitoring Requirements* —
 - (1) *Pressure* — The Permittee shall periodically monitor the differential pressure (*i.e.*, pressure drop) across the DOC.
 - (i) Except during period of startup, DOC differential pressure shall be maintained within 2 inches of water column (± 2 "w.c.) of the average differential pressure measured during the initial performance test.
 - (ii) The DOC differential pressure shall be measured at least once per month to demonstrate that the differential pressure is within the operating limitation established during the initial performance test.
- (c) *Site-Specific Monitoring Plan (SSMP)* — The Permittee shall prepare a SSMP that addresses the monitoring system design, data collection, and the quality assurance and quality control elements provided in Proviso No. 29(a) above and 40 CFR 63.8(d).
 - (1) *Quality Control Program* — As provided under 40 CFR 63.8(d), the SSMP shall include, at a minimum, a written protocol that describes procedures for each of the following operations:
 - (i) Initial and any subsequent calibration of the CMS;
 - (ii) Determination and adjustment of the calibration drift of the CMS;
 - (iii) Preventive maintenance of the CMS, including spare parts inventory;
 - (iv) Data recording, calculations, and reporting;
 - (v) Data recording, calculations, and reporting; and
 - (vi) Program of corrective action for when the CPMS is malfunctioning.
 - (2) As provided under 40 CFR 63.6625(b), the SSMP shall also include the following elements:

- (i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;
- (ii) Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;
- (iii) Equipment and procedures for performance evaluations, system accuracy audits, or other audit procedures;
- (iv) Ongoing operation and maintenance procedures in accordance with the provisions of 40 CFR 63.8(c)(1)(ii) and (c)(3), which are provided in Provisos (A) through (C) below;
 - (A) The Permittee shall keep the necessary parts for routine repairs of the affected CMS equipment readily available.
 - (B) All CMS shall be installed, operational, and the data verified as specified in Subpart ZZZZ either prior to or in conjunction with conducting performance tests under 40 CFR 63.7, except 40 CFR 63.7(e)(1) does not apply as per *Table 8 to Subpart ZZZZ*.
 - (C) Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system.
- (v) Ongoing reporting and recordkeeping procedures in accordance with provisions in 40 CFR 63.10(c) and (e)(2)(i), which are provided under Proviso Nos. 32(a)(4) through (6) and 33(b)(1)(ix) below.
- (3) The Permittee shall conduct an annual CPMS equipment performance evaluation, which shall be detailed within the SSMP.

30. *Compliance and Performance Test Methods and Procedures —*

- (a) *Performance Testing* — The Permittee shall conduct performance tests to demonstrate compliance with the CO emission limitation in Proviso No. 28 above.
 - (1) *Frequency* — Each performance test shall be conducted no less frequently than once every three (3) years.
 - (2) *Procedures* — Each performance test shall be conducted according to the requirements of 40 CFR 63.6620 and item 3 of *Table 4 to Subpart ZZZZ*.
 - (3) *Test Methods* — The Permittee shall use the following methods for performance testing of Engine #3:
 - (i) Method 10 of Appendix A-4 to 40 CFR Part 60 shall be used in the determination of CO emissions.
- (b) *CPMS Performance Evaluation* — The Permittee shall conduct the CPMS equipment performance evaluation specified in the SSMP at least annually.
 - (1) When conducting any performance test of Engine #3, the Permittee shall simultaneously conduct a performance evaluation of the CPMS.

31. *Records Retention* — All records (including all reports and notifications submitted to the Department) shall be maintained in a form suitable for inspection for a period of at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
- (a) At a minimum, the most recent 2 years of data shall be maintained onsite, in a form suitable for expeditious review, and made available immediately upon request.
- (b) The remaining 3 years of data may be maintained off site in a form suitable for inspection.
32. *Recordkeeping Requirements* —
- (a) The Permittee shall maintain the following records:
- (1) *General* —
- (i) A copy of each notification and report submitted to the Department and/or EPA, include all relevant data required under Proviso No. 33 below;
- (ii) All required data needed to demonstrate compliance with Subpart ZZZZ, including both raw and averaged CPMS temperature data, DOC differential pressure checks, performance test results, and performance evaluation results;
- (2) *Engine #3* —
- (i) Monthly and 12-month rolling totals of the hours of operation for Engine #3;
- (ii) The occurrence and duration of each malfunction of Engine #3;
- (iii) All reporting data specified under Proviso Nos. 33(b)(1)(vii) below;
- (3) *Diesel Oxidation Catalyst* —
- (i) All maintenance performed on the DOC;
- (ii) The occurrence and duration of each malfunction of the DOC;
- (iii) All differential pressure checks performed on the DOC;
- (iv) All reporting data specified under Proviso Nos. 33(b)(1)(vii) below;
- (4) *Continuous Parameter Monitoring System* —
- (i) All temperature data (both raw and averaged) necessary to determine the conditions of performance tests and performance evaluations, including data during unavoidable CPMS breakdowns and out-of-control periods;
- (ii) All CPMS calibration checks;
- (iii) All adjustments and maintenance performed on the CPMS, including the nature of the repairs or adjustments to the CPMS when inoperative or out-of-control;
- (iv) All procedures that are part of a quality control program developed and implemented for the CPMS under Proviso No. 29(c)(1) above.
- (v) The beginning and ending dates and times of each period where emissions, temperature readings were exceeded during normal operation and periods of startup (except as provided in Proviso No. 27(a)(2) above), shutdown, and malfunction;

- (vi) The nature and cause of any malfunction (if known);
- (vii) The corrective action(s) taken to remedy the malfunction and/or preventive measures adopted to prevent future malfunctions; and
- (viii) All reporting data specified under Proviso Nos. 33(b)(1)(ix) below.

(5) *Corrective Actions* —

- (i) Actions taken during periods of malfunction to minimize emissions in accordance with Proviso No. 25, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation;

(6) *Site-specific Monitoring Plan* —

- (i) The current SSMP and performance evaluation plan, as well as previous (*i.e.*, superseded) versions.
 - (A) Previous versions of the SSMP and performance evaluation plan shall be maintained for at least 5 years following the implementation of each new revision in accordance with Proviso No. 31 above.

33. *Reporting Requirements* —

(a) *Performance Tests & Evaluations* —

- (1) The Permittee shall provide the Department with the results of each performance test or performance evaluation within 60 days following the conclusion of said test or evaluation.
- (2) The Permittee shall provide the results of each CPMS performance evaluation simultaneously with the results of each performance test.

(b) *Semiannual Compliance Report* — The Permittee shall submit a semiannual compliance report (SCR) for Engine #3 to the Department as follows:

(1) *Contents* — The following information shall be included in every SCR:

- (i) Company name and address;
- (ii) Certification of Truth, Accuracy, and Correctness (CTAC) statement signed by the Responsible Official of the facility, certifying the accuracy of the content of the SCR;
- (iii) Date of SCR;
- (iv) Beginning and ending dates of the reporting period;
- (v) The monthly and 12-month rolling totals of operational hours for Engine #3 for each month in the reporting period;
- (vi) If there were no process equipment malfunctions, no deviations from any applicable emission or operating limitations, and no periods during which the CPMS was malfunctioning or out-of-control, the Permittee shall include a statement that states the following:

- (A) "During the reporting period, there were no process equipment malfunctions, no deviations from any Permit conditions (including emissions or operating limitations), and no periods during which the CPMS was malfunctioning or out-of-control."
- (B) The above statement may be modified as needed to accommodate for any malfunctions or deviations that may have occurred during the reporting period.
- (vii) *Malfunctions* — If a malfunction occurred during the reporting period, then the SCR shall include the following:
 - (A) The number, duration, and a brief description for each type of malfunction which occurred during the reporting period and caused (or may have caused) any applicable emission limitation to be exceeded;
 - (B) A description of actions taken by the Permittee during a process equipment malfunction to minimize emissions in accordance with Proviso No. 25, including any actions taken to correct a malfunction.
- (viii) *Permit Deviations* — If a deviation from any permit condition occurred during the reporting period, then the SCR shall include the following:
 - (A) The number, duration, and a brief description for each type of deviation which occurred during the reporting period and caused (or may have caused) any permit condition, emission limitation, or operating limitation to be exceeded;
 - (B) A description of actions taken by the Permittee during a malfunction of Engine #3 to minimize emissions in accordance with Proviso No. 25, including any actions taken to correct a malfunction.
- (ix) *CPMS Malfunctions* — If there was any period during which the CPMS was malfunctioning or otherwise out-of-control during the reporting period, then the SCR shall include the following:
 - (A) The date and time that each malfunction started and stopped;
 - (B) The date, time, and duration that each CPMS was inoperative, except for zero (low-level) and high-level checks;
 - (C) The date, time, and duration that each CPMS was out-of-control, including start and end dates and hours and descriptions of corrective actions taken;
 - (D) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period;
 - (E) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period;
 - (F) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes;
 - (G) A summary of the total duration of CPMS downtime during the reporting period, and the total duration of CPMS downtime as a rolling percent of the total operating time of Engine #3 at which each CPMS downtime occurred during that reporting period;

- (H) An identification of which monitoring parameter (*i.e.*, temperature, pressure) of Engine #3 that was determined to be out-of-control or outside of the established limits of said monitoring parameter;
 - (I) A brief description of Engine #3 and the CPMS;
 - (J) The date of the latest CPMS certification/audit; and
 - (K) A description of any changes in CPMS, processes, or controls since the last reporting period.
- (2) *Reporting Period* — The SCR shall adhere to the following schedule:
- (i) The first SCR must cover the period beginning on the initial startup date of Engine #3 and ending on June 30 or December 31, whichever is first.
 - (ii) Each subsequent SCR must cover the semiannual reporting period from January 1 through June 30 or July 1 through December 31.
 - (iii) All SCR must be postmarked or delivered no later than July 31 or January 31, whichever is first date following the end of the reporting period.